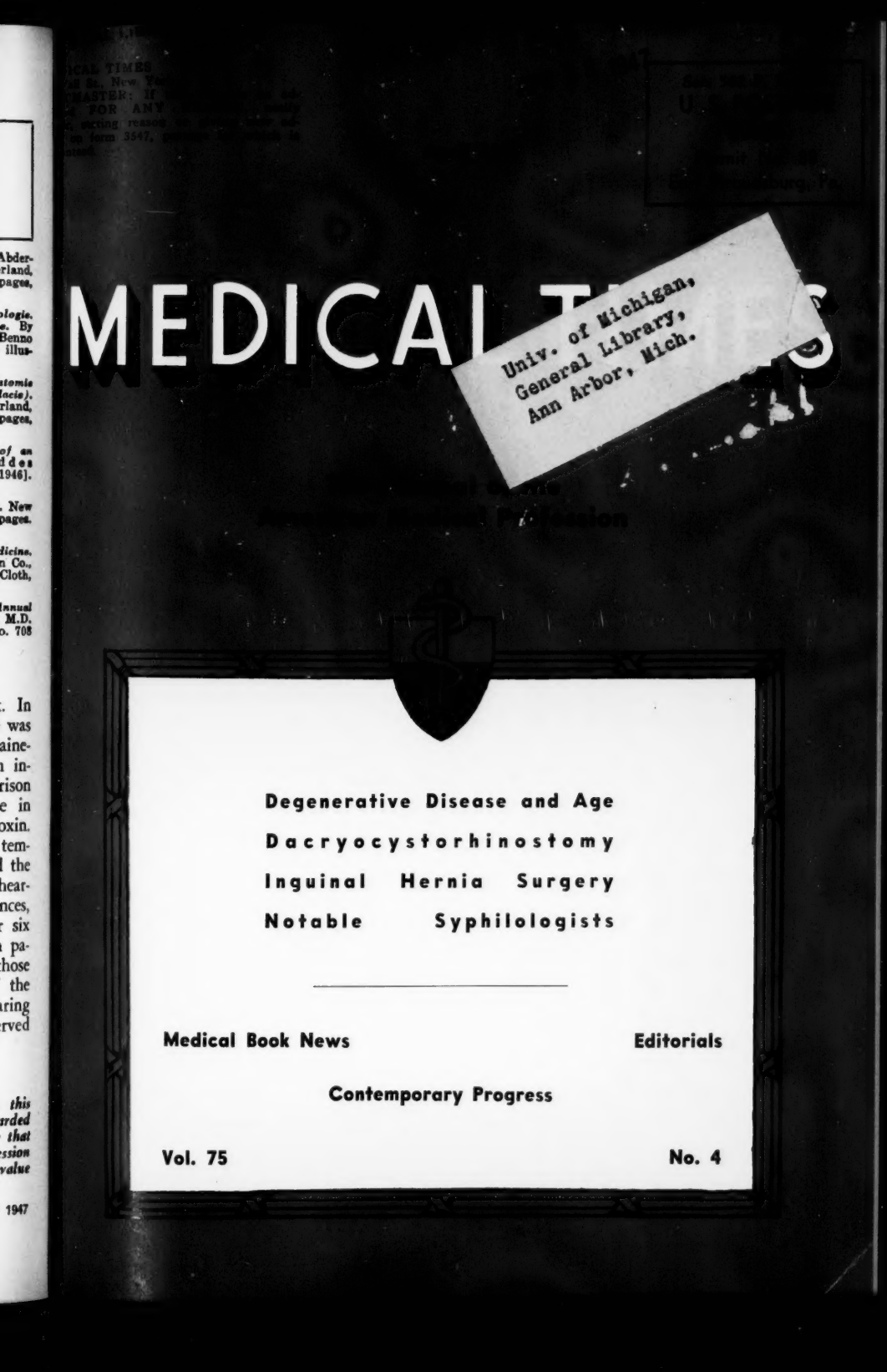

Degenerative Disease and Age

Dacryocystorhinostomy

Inguinal Hernia Surgery

Notable Syphilologists

Medical Book News **Editorials**

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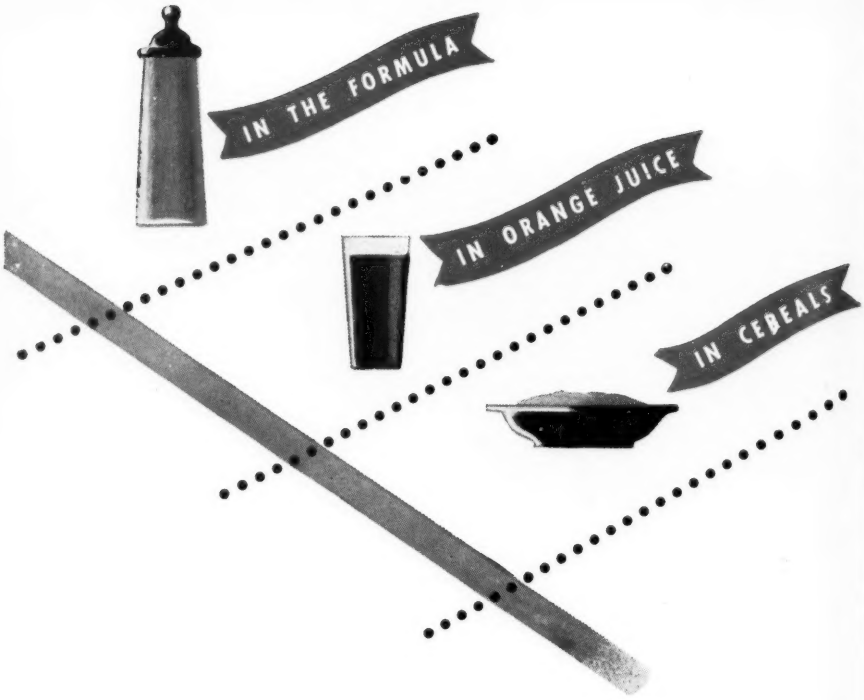

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EDITORIALS

The Crusade for Sanitary Subways

We have adverted editorially a number of times to the solicitous care bestowed upon the cattle shipped by our railroads, as contrasted with the subway transportation of humans in large cities. Thus cubic air space is meticulously regulated. Recently we learned that hogs have to be detrained every 28 hours and fed and rested for five hours. All this comes under Interstate Commerce Commission regulations.

Even though slavery in the old sense no longer exists, and human beings can not be bought and sold, their economic value to the community cannot be gainsaid. Why, then, should they not be treated at least as well as the aforesaid animals? At the same time that obscenely unhygienic conditions prevail hypocritical protestations regarding the dignity and sanctity of the human personality are heard on every hand; never has so much protestation helped so few.

Since we last discussed the subways as menaces to public health this pressing situation has changed—and gotten worse.

We suggest that a car used for the transportation of cattle be borrowed, placarded with the Government's regulations cited by us, equipped with a loud speaker, and placed on licensed public exhibition.

The argument for the care and comfort of the cow and hog has to do with interstate transportation involving relatively short periods of time; but the average traveler in the subway, making two trips daily in a state of partial suffocation and lowered vitality, suffers greater risk and damage in the course of his 1,500 hours of travel in ten years than any underprivileged and yet protected animal ever does.

Here is one case where the very great powers (to put it mildly) of our health authorities can not, seemingly, be effectively invoked.

But with the treatment of cattle as precedent, what are our great legal minds thinking about? What a theme for a Jonathan Swift. Pray for one.

Aural Engineering

Harvey was aided by a non-medical scientist in arriving at an understanding of the valvular mechanics of the venous circulation.

In his *History of Medicine,* Garrison remarks: "Medicine owes much to the great mathematicians and physicists of the seventeenth and eighteenth centuries, who developed the theory of vision and almost the whole physiology of respiration."

Recently engineers have collaborated with surgeons in a study of the mechanics of locomotion with the result that far better amputation prostheses are in process of production.

We venture to suggest that still unraveled mysteries of the inner ear (labyrinth) might be elucidated through the joint studies of physiologists, clinicians, neurosurgeons, neurologists, engineers and physicists, with a view to a better understanding of the mechanisms and therapy of the various forms of vertigo, especially Ménière's syndrome.

Early Diagnosis of Minimal Tuberculosis

The advantages to both patient and community of early diagnosis of tuberculosis are obvious. The great majority of patients with minimal lesions present symptoms. While these symptoms are not characteristic or specific for this disease they must not be dismissed as due to chronic bronchitis, asthma, winter cough or cigarette cough. Chest x-ray and inquiry

as to contact infection are always in order as diagnostic aids. Of course, hemoptysis commands prompt study. Sputum examination and the tuberculin test are requisite. Acute upper respiratory manifestations must not be mistaken for pneumonia, pleurisy, grippe, etc. About 30 per cent will have râles and about 20 per cent positive sputum. Roentgenographic examination must be the main reliance. Fluoroscopy is of value but cannot be solely relied upon; if it is positive, well and good; if it is negative, the appeal must be to roentgenography.

These points were recently made by Bobrowitz and Dwork in the *New England Journal of Medicine.*

General practitioners, warns the National Tuberculosis Association, who see 30 per cent of the general population annually, must be alert to the ill-defined manifestations of early tuberculosis; it is their very familiarity with the findings and symptoms of *advanced* tuberculosis which is sometimes the very factor which causes them at times to overlook the minimal lesions.

Medicine As a Totalitarian Prop

The vast German bureaucracy constituting the social security system of the Reich became "one of the greatest props of the totalitarian state," according to the Canadian Royal Commission Report, 1943.

Obviously, the socialization or nationalization of medicine in what is now our Federal Union of sovereign States would also serve admirably toward the setting up of a Fascist or Communist régime in place of the Federal Union.

But such a prospect, happily, appears to be fading rapidly. There never was any good reason for its contemplation. The social sanity of our people in the long run is essentially dependable—a truth especially emphasized by Abraham Lincoln.

The Eminent Surgeon's Own Family As Patients

Some of us were nonplussed when we learned of Harvey Cushing operating upon his daughter for appendicitis, and it is even probable that most of us recoil from personal intervention surgically in the family, that is, in the way of major surgery.

So we were interested to encounter in MacCullum's book on Halsted two accounts of that great surgeon's operations on members of his immediate family. Thus, in 1881, he arrived by chance in Albany when his sister, after the birth of her first child, suffered a severe hemorrhage. He found her ghastly white and pulseless. Halsted writes: "After checking the hemorrhage I transfused my sister with blood drawn into a syringe from one of my veins and injected immediately into one of hers. This was taking a great risk but she was no nearly moribund that I ventured it and with prompt results. . . . A year later I was summoned to Albany one evening by telegram to see my mother, who for two years or more had been ill with an undiagnosed affection. . . . I found her very ill, slightly jaundiced, with tumefaction and great tenderness in the region of the gallbladder. So at 2 A.M. I operated, incised the gallbladder which was distended with pus and extracted seven stones. This was, I think, one of the earliest operations for gallstones in the country. My mother died about two years after my operation."

Such absolute belief in one's courage and skill—not to say infallibility—are all very well when things go well; but morbidity and death would introduce another note—and a harsh one. Besides, what real justification is there for such proceedings when one is surrounded by skilled surgeons—who must wonder at their cancellation.

No doubt the psychology of such situations affords a clue to some aggressive, never self-questioning, successful careers.

Degenerative Disease Associated With Age

William B. Kountz, M.D.
Saint Louis, Missouri

The medical need of attention to diseases during the latter part of life need not be emphasized. Medical thought in this field has been rather staggered since a great part of medicine has derived its viewpoint from anatomical study. The attitude of physicians in treating diseases of this period is to wait until an individual comes down with an acute, debilitating episode occurring in the course of chronic diseases (thus coronary thrombosis in arterial degeneration) which must be recognized clinically and anatomically in order to identify it, and then to apply medical methods for its relief (Stieglitz, E. J.: '43). In the acute diseases, such as acute infections, such a viewpoint may be quite the proper way of medical attack, although even in these conditions it is possible that if more attention were applied to the body before the disease attacked, there would be less acute disease.

In the diseases toward the end of life, the so-called degenerative conditions develop and it is necessary that they be recognized early in the process and that one not wait until an acute episode has occurred before treatment is begun, because it may be irreparable. It is needless to say that an individual with advanced arteriosclerosis probably cannot be treated medically with success except in a palliative way. It is necessary, therefore, in a great group of conditions beyond mid-life to view them not from an anatomical but from a physiological viewpoint. Medicine must go far in recognizing the disturbed functions of the body that lead to degenerative changes and preferably treat the patients at a much earlier state than when there is total decline due to acute episodes. It is, therefore, necessary to form a different concept of therapy in disease associated with degeneration. It must be an attempt to keep people healthy by recognizing and controlling the changes occurring in the body (Kountz, W. B.: '46).

Pediatrics may be used as a point of emphasis. Before the advent of modern medicine with its scientific understanding and good pediatric care, as many as one out of every four children died before reaching the age of maturity. Many others developed heart disease, blindness, etc., and conditions which led to ill health in later life (Abt, J. A.: '26). Scientific control and understanding of disease of this early period of life has caused the mortality to drop to a low level. By way of contrast, one may say that at the present time, under favorable conditions, out of every one hundred children that are born in a normal state of health approximately ninety-eight live. It is, therefore, reasonable to assume that the scientific control of the period at the opposite end of the life cycle or the declining phase may result in healthier and more normal older individuals.

The problem of health in the older individual is now becoming more pressing since the control of infection by means of chemotherapy and other methods has caused the population to grow older. There are many older people in whom the incidence of invalidism is high. It is pointed out by the Public Health Service of the United States that the rate of growing old in the population of the United States is increasing. It was found that over sixteen per cent of the population was over fifty-five in 1940, and by 1980 it is estimated that as much as thirty per cent of the population will be over fifty-five (National Resources Committee, '38). This is a high percentage. As many as fifty per cent of these oldsters will be totally or partially incapacitated. It is, therefore, important and necessary for doctors, as well as lay individuals, to understand the importance of controlling the diseases causing invalidism which are associated with the aging processes. These are the so-called degenerative diseases.

From the St. Louis City Infirmary Hospital and Washington University School of Medicine.

It has been our privilege through the assistance of the progressive city officials of St. Louis, Missouri, to have studied for a period of nine years at the St. Louis City Infirmary Hospital the processes of aging in the human body. It is to some of these observations that I should like to call attention.

There is an old saying in medicine that a man is as old as his blood vessels, which, in a limited sense, is true. The important thing, however, is to realize that blood vessel disease does not appear spontaneously but is caused by an underlying diseased state. This condition, as well as many others, is not due to age in years, since people of advanced age may be seen without it, while others, who are younger in years, may be seen with it in advanced form. It is, therefore, necessary for physicians to study the cause of the disordered state of the human body to find the reason for the disease process which leads to the degeneration of the blood vessels. Such conditions as arteriosclerosis, coronary thrombosis, hypertension, arthritis, kidney disease or nephritis as well as many other diseases may be brought under control and prevented as smallpox and typhoid are prevented today. The old quip of "pick your ancestors to live a long healthy life" applies today but the modern concept of it is, after forty-five years of age, "pick your doctor who knows geriatrics" (Kountz, W. B.: '45).

It is known that in many people between the ages of thirty and forty significant changes begin to accur in the body tissues which indicate that early degeneration has begun. We have found that there are methods to recognize early changes. As in childhood and youth, nutrition plays an important part in the oldster's health. Such a thing as adequate diet is important, but in older people there are additional mechanisms which have to be taken into account. These mechanisms are a normal working intestinal tract, normal functioning glands of internal secretion, as well as adequate kidney excretion. All of these factors must be evaluated in understanding the health of older people. It has been our experience that with proper evaluation of the individual, a more rational form of therapy may be administered. The results of treatment are far better under a studied evaluation of the body's needs than were obtained previously without such an attempt at studying its requirements. It is, then, clear that degenerative changes appear long before serious disease occurs. It is necessary that the patient past mid-life report regularly for clinical evaluation of his body function and not wait for a crippling disease to drive him to medical care (Thewlis, M. W.: '42).

We believe that individuals decline or age in different ways, or in so-called patterns. Some lose partial function of one or more organs of the body, which in turn results in a state of decline of total function which is usually peculiar to a certain percentage of individuals. Other individuals decline more uniformly. This latter group shows a uniform exhaustion of the tissues. It is this group which appears to remain in the best health for the longest period. As an example of the first group, failure of the gastro-intestinal tract to secrete certain substances may be cited. This results in improper function—poor absorption of foods, etc., which may lead to fundamental disease when age advances, or when some crisis such as infection, etc., produces a strain on the organism. The lack of gastric enzymes and hydrochloric acid secretion by the stomach, if protracted, may be associated with defective liver function and poor protein metabolism and a so-called negative nitrogen balance which can result in wasting of all body tissues. If the condition is recognized and treated, the ultimate serious condition may be prevented (Kountz, W. B.: '46).

Diabetes may be used as an example of a common endocrine deficiency disease. This condition may be improved and controlled by the administration of insulin. It has been our experience that insulin, when properly administered, has many other benefits than the relief of the diabetic state. Many other similar deficiency diseases in individuals are found in later life. Thyroid and the substances produced by the adrenal cortex improve muscle nutrition and hence improve muscle function

in the oldster. Many more examples of physiology could be recited which, applied to man, afford improvement in body health in older people (Davis, N. S. III: '43; Bortz, E. L.: '43).

In a discussion on this subject, one would like to know if it is possible to actually improve health in old people. At the St. Louis Infirmary, where we have maintained a research project for geriatric study, we find that individuals may be helped. We have been able to improve the health of chronically diseased individuals in this institution and its adjacent hospitals by studying nutritional needs. Usually, the best results come from understanding and correcting the chemical and physiological balances of the body with hormonal substances.

As far as diet is concerned, a high protein intake, above the standard of one gram per kilogram of body weight, plus a high carbohydrate intake, is usually the best diet for most individuals past midlife. A high fat diet, in our experience, has been associated with rapid vascular degeneration (Kountz, et al.: '45). Protein is an important food and the physician must know how it can be best administered so that it will be utilized.

The problem of decline is, therefore, one of a complicated biochemical and physiological, as well as physical, study. It differs from the problem of youth and growth in that the physician must recognize and treat declining function of the organism as well as administering proper food stuffs.

It is important that the medical profession and, especially, our universities and hospitals, train men in the field of geriatrics. They must know the principles of degeneration, how to recognize the various states, and understand the application of the natural laws which govern the process and how to treat the individuals.

Aside from direct medical therapy, physical and occupational therapy in one form or another is an important adjunct in the treatment of chronic disease. In the process of treatment, many oldsters are benefited by graded physical activity and physical training.

Summary

Much more attention should be paid by hospitals and medical schools to the field of geriatrics. It is important to train physicians who are on the alert for early changes in order to prevent severe disease. Once severe disease has occurred special forms of therapy must be instituted to rehabilitate the individuals. The best solution, by far, to the problem of chronic disease associated with age is prevention.

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600 South Kingshighway

The Use of a Rubber Insert in Dacryocystorhinostomy

Milton T. Gaillard, M.D.
Baldwin, N. Y.

In order that the tears be carried off through the proper channels, the puncta, situated on the eyelids, should be patent and lie in contact with the eyeball; also the canaliculi, lacrimal sac and nasolacrimal duct and its nasal orifice must be unobstructed. Tearing may be produced by an inability of the drainage system to adequately carry off excess tears that might be formed in any external irritation of the eye. We are not concerned with this problem in this paper, but rather with such changes as occur in the drainage system that prevent the flow of a normal amount of tears.

This system may become diseased due to the formation of scar tissue which produces a stricture or total occlusion of any one or more parts. This frequently follows mechanical or chemical injury or may be due to the presence of an inflammatory process based on bacterial infection. Syphilis of the soft tissues or syphilitic periostitis may often be a factor. If the nasolacrimal duct becomes occluded these passages are then transformed into a sort of cul-de-sac which provides a ready-made culture tube for bacterial growth. If the sac becomes distended the condition is termed a mucocele. Digital pressure over the swelling may force the contents into the conjunctival sac, or, if the lower end is not occluded, the contents will fall into the nose.

Ivanova reported on Auerbach's first 135 cases of dacryocystorhinostomy in 1926. He found that the size of the bony window was the most important factor in the entire operation. His windows measured 1.5 to 2 cms. long and 1 to 1.5 cms. wide. Some 6000 operations have been performed at the Helmholtz Central Ophthalmological Institute with some 97 percent resulting in a clean condition of the lacrimal sac. Most were done for cellulitis and dacryocystitis after trauma, many followed war injuries. When an intra-ocular operation was contemplated rhinotomy was performed routinely. Pathological conditions of the nose, such as atrophic rhinitis, do not contraindicate using this procedure. Dacryocystorhinostomy assures asepsis of the conjunctival sac more effectively than extirpation.

Bulsa reviewed 39 cases in which postoperative hemorrhage occurred. He feels that the bleeding and coagulation times should be determined preoperatively and that the operation should be deferred if these are abnormal. The bony window should be made as high and as anteriorly as possible to avoid the erectile zone of the turbinate process and the ethmoid cells. The nasal mucous membrane should be completely sutured.

Spake calls attention to the sufficient destruction of the ethmoid cells, should they lie in close proximity to the window, to prevent postoperative closure of the area by granulation tissue.

Muldoon reports the restoration of patency of the nasolacrimal duct by means of a vitallium tube. This operation was performed in four cases.

Hughes, Guy and Bogart, in 1941, discussed the H-shaped incision and the importance of suturing the sac to the nasal mucous membrane.

Lukie has observed cases of chronic purulent dacryocystitis that healed readily after surgery and he feels that chronic infection in no way should contraindicate the procedure. These cases healed rapidly because adequate drainage was instituted.

Yanes traces the development of this operation. He feels that suture of the mucous membrane is required for best

Presented at the November 18, 1946 meeting of the Nassau Surgical Society at Meadowbrook Hospital, Hempstead, N. Y.

results. He also considers it the only operation for the surgical treatment of lacrimation due to traumatic or nontraumatic obstruction of the lower lacrimal ducts.

Pereira uses the standard procedure and feels that if the passage remains patent for two months after operation the operation is a success and should give lasting results.

Bangerter described three needles which facilitate the placing of sutures in the mucosa. One is right angled, one obtuse and one an acute angle.

Belmonte described an operation which is probably a little more difficult but is done without sectioning the internal palpebral ligament. He feels that the canaliculi are left intact and the muscular action which propells the tears into the sac is preserved.

The operation of external dacryocystorhinostomy is performed to relieve obstruction in the nasolacrimal duct but is not indicated if the puncta or canaliculi are obstructed. Preoperatively the daily instillation of a 3000 units per cc. solution of penicillin has been found very effective in cleaning up the infected condition of the sac. This has also been very useful in the presence of fistula. Fistulas seem to close readily after a few instillations of penicillin. I believe the operation is indicated when persistent tearing or chronic sac infection is present and cannot be relieved by more simple means, for example, probing of the duct. Previous acute infection is not a contraindication, in fact, these often are the most grateful patients. The age and general health of the patient must be considered preoperatively. Prior to the operation cooperation with the rhinologist is of great importance. The nose should be viewed and the opening of the nasolacrimal duct should be inspected, for if this is occluded by a polyp or an enlarged middle turbinate the cure lies simply in correcting these defects. Syphilis, occasionally a reason for obstruction, should be ruled out. X-rays of the skull may reveal an old fracture in the area, or tumor, or give evidence of a periostitis. The latter condition is almost always found if there has been much infection in the sac.

Novocaine, 2 percent, used as a local anesthetic, is injected along the line of incision, in the supertrochlear area and into the supra and infra-orbital foramina. The nose is sprayed with a 2 percent solution of pontocaine and packed with ½ inch gauze strip. Nembutal and H.M.C. #1 or 2 has been found effective for adequate sedation.

The skin incision is small, about ¾ inch long, and is carried downward and slightly laterally so that it ends over the upper border of the lacrimal crest. The skin is not undermined. A lacrimal sac retractor spreads the wound. The fibers of the orbicularis muscle are separated with scissors and the periosteum exposed. At this point care must be taken to avoid the angular vein. If it cannot safely be retracted and is seen it should be tied. The retractor is released and reengaged to retract the fibers of the orbicularis muscle and the wound is then firmly dilated. Some difficulty with venous oozing may be encountered at this point. It is common practice to use adrenalin on cotton pledgets, but this may be harmful as sometimes large amounts are used. Thrombin, topical, Parke, Davis and Company, has been found very effective in controlling this type of bleeding in soft tissue and bone and its action is almost instantaneous.

A small incision is made in the periosteum over the lacrimal crest and further separation continued with a small periosteal elevator. This is done rather than making a long incision as the sac may be injured. As the separation is carried out the sac is retracted with the periosteum. The lacrimal crest may be removed with a small straight chisel. There are many ways of providing an adequate window but I believe the simplest method is to use a ⅝ inch DeVilbiss trephine, centered at the posterior border of the nasal process of the maxilla. Enlargement may be effected with chisel and rongeurs.

After the window is made it is enlarged to be one and one half times as large as the sac and most of the bone is removed below. In some cases the ethmoid cells will be exposed. If this occurs they should be removed with a curette.

A Bowman probe is passed through the lower canaliculus and the sac is localized. The inner wall of the sac is slit with a scalpel, the ends being enlarged to form an H-shaped incision.

The nasal packing is then removed and a similar H-shaped incision is made in the nasal mucous membrane. The anterior end of the middle turbinate may be removed if it lies over the incision. The H-shaped incision is used as it gives a larger opening and there is less tendency to close postoperatively.

The posterior lip of the nasal mucosa and the posterior lip of the sac are now closed with three interrupted chromic sutures.

Several failures early in the postoperative course were found to be due to the presence of granulation tissue in the area of anastomosis. This was eliminated by the use of the cautery nasally. Since that time I have devised an insert, made from a small rubber catheter, which is allowed to remain in the sac and carried out through the nose. This stays in place about five days. This, I believe, will eliminate the problem of early closure.

Postoperatively antiseptic eyedrops may be used and the patient is allowed out of bed the day following operation. The skin sutures are removed on the third day and the catheter on the fifth day. No further care is required unless there is a return of the epiphora. Most late failures are attributed to making too small a bony window.

Conclusions

1—A large window prevents late closure.

2—Use of thrombin topical prevents venous hemorrhage at operation and is much safer than large amounts of adrenalin.

3—Use of a rubber insert prevents early closure of the anastomosis.

4—Use of an H-shaped incision gives a larger opening and prevents early closure.

5—The nasal method or other types of surgery are antiquated. The external route of Dupuy-Dutemps is the only satisfactory method.

6—Penicillin solution (3000 units per cc.) injected daily has been found a very good means of clearing up chronic sac infection preoperatively.

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5 PARK AVENUE.

The William Browning Prize

For the past four years there has been no prize awarded for essays in competition for the William Browning Prize of $50.00 in cash. This is largely due to the fact that so much time was devoted to the war effort. However, it is expected that more competing members will be heard from this year.

Competition is open only to members of the Associated Physicians of Long Island. Essays of not more than 5,000 words, typewritten, double-spaced, unsigned, distinguished by a motto, and containing name and address of the writer with motto in separate envelope, must be received before December 1, 1947.

Award is to be made at the annual meeting in January, 1948, at which time the author of the essay receiving the award will read his paper or an abstract. The prize-winning essay becomes the property of the Association for publication in its official organ, the MEDICAL TIMES. The original copy is to be bound and permanently filed in the Association's archives.

Essays should be mailed to the William Browning Prize Essay Committee, 1313 Bedford Avenue, Brooklyn 16, N. Y.

The Evolution of Inguinal Hernia Surgery

IV*

In Part III of this series we discussed Macewen's operation for the radical cure of inguinal hernia. This celebrated Scottish surgeon was offered the chair of surgery at the opening of the Johns Hopkins Medical School and Hospital but his conditions were impossible to meet and the post was ultimately filled by the subject of this article—William Stewart Halsted, whose operation for hernia follows Macewen's in our historical sequence.

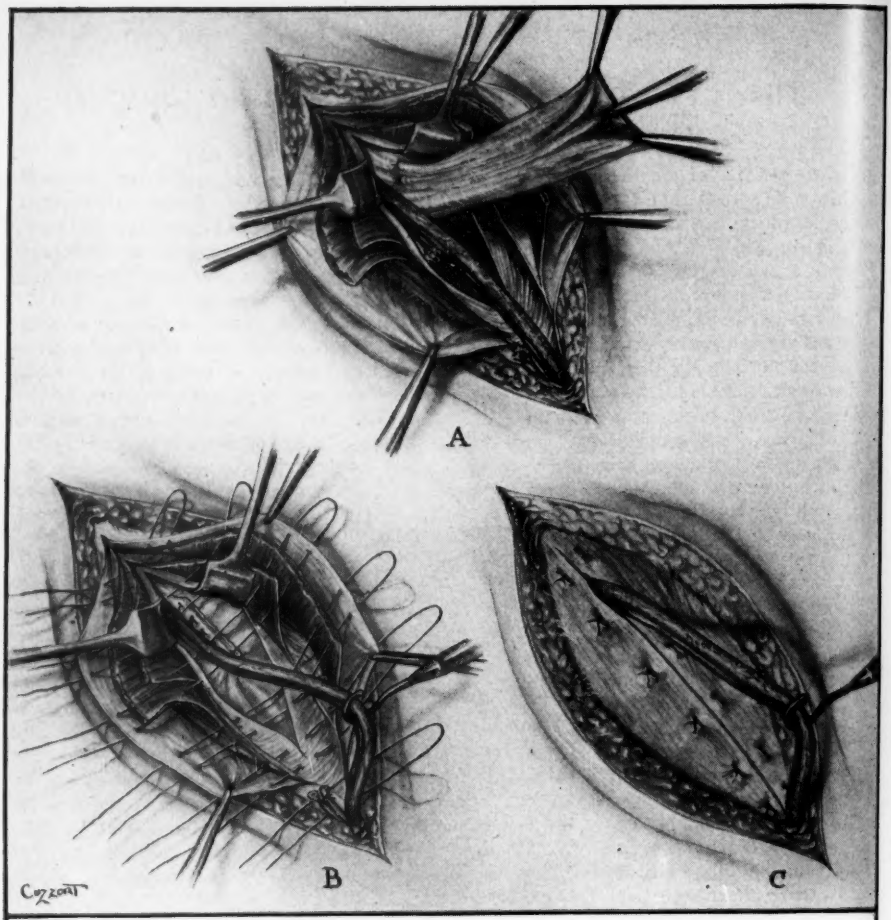
Halsted's early operation (later modified) was worked out in 1889. It was much like Bassini's, whose operation was given to the world of surgery in the same year. As to priority, we should like to quote Halsted himself. He says (*Johns Hopkins Hospital Bulletin* 29:20, March, 1893): "More than three years ago I described a new operation for the cure of inguinal hernia in the male. Six or eight months later, Bassini of Padua published his operation for the cure of inguinal hernia which he had performed two hundred and fifty-one times, with only seven returns and no deaths except one, and that from pneumonia after the wound had healed. . . . Bassini's operation and mine are so nearly identical that I might quote his results in support of my operation."

Halsted was born in New York City September 23, 1852. He was a noted football captain at Yale ('74) and took the M.D. degree at Columbia University ('77). After interning at Bellevue he organized the medical service of the newly built New York Hospital. The years 1878-80 were spent in Vienna, after which he started surgical work in New York and became attached to the staffs of Bellevue, Presbyterian and Roosevelt Hospitals. In addition to this heavy duty he was a demonstrator in anatomy at the College of Physicians and Surgeons and also conducted a famous private "quiz."

He left New York in 1886 to work in Welch's Baltimore laboratory on some of the larger aspects of surgery. In October, 1889 he was appointed Associate Professor of Surgeary in the Johns Hopkins School and Acting Surgeon to the Hospital. He soon became Surgeon in Chief to the Hospital and on April 4, 1892, Professor of Surgery in the School.

Halsted worked especially in the fields of hernia, cancer of the breast, fractures (devised the buried plate and screw method), intestinal suture, diseases of the gallbladder and gall ducts, thyroid and parathyroid, the large arteries and aneurysms. He introduced gutta - percha and silver foil dressings and rubber gloves (1890). According to Mont R. Reid he performed the first centripetal transfusions into arteries, the first refusions of blood, the first successful ligation of the first portion of the left subclavian artery, the first excision of a subclavian aneurysm. He devised methods for partial, progressive and complete occlusion of the aorta, common iliac and other arteries by the use of metal bands. It was during his New York period (1884) that he developed intradermal and neuro-regional or block (conduction) anesthesia. He operated on a *physiologic* basis; healing was insured by gentle handling of tissues, perfect control of hemorrhage, and complete cleanliness. He reasoned that it was the injury or weakening of tissues that invited infection.

* Part IV of a series.



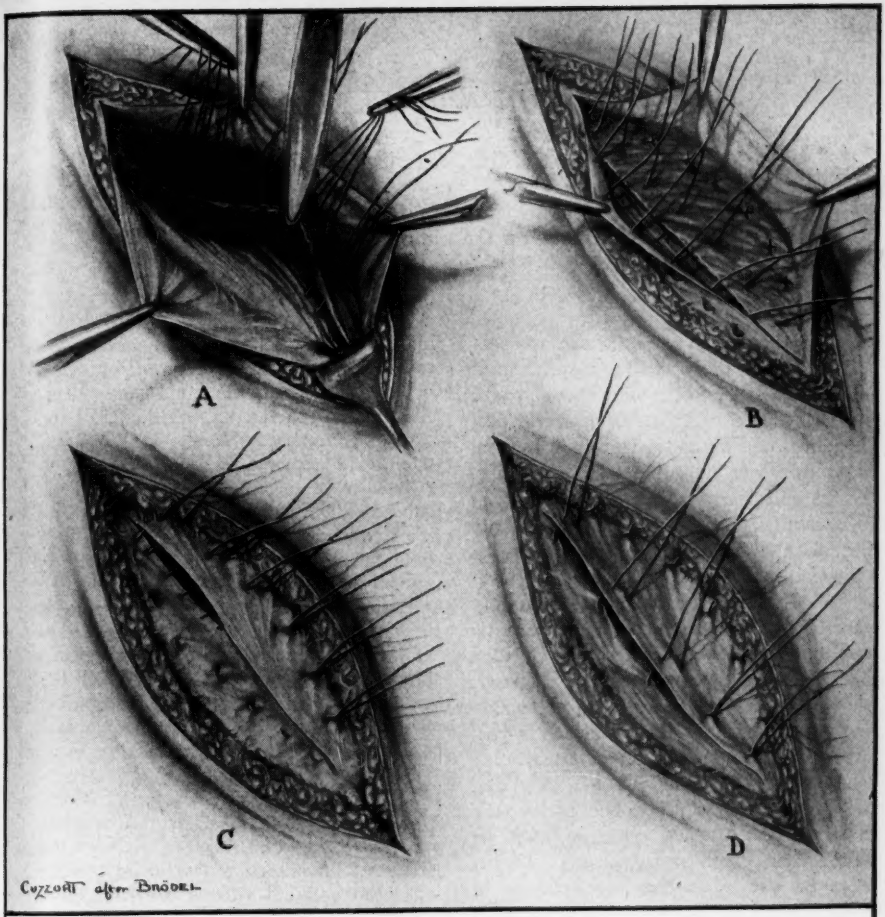
THE HALSTED OPERATION

(Early phase)

A. The aponeurosis of the external oblique muscle, the internal oblique muscle, the transversalis muscle, and the transversalis fascia are cut through. The vas deferens and the blood vessels of the cord are isolated and all but one of the veins of the cord are excised; the sac having been completely isolated and its contents replaced, the peritoneal cavity is closed by fine silk mattress sutures.

B. The sac is cut away close to the sutures. The cord is raised to facilitate the introduction of six deep mattress sutures, which pass through the aponeurosis of the external oblique and through the transversalis muscle and transversalis fascia on one side and through the transversalis fascia, Poupart's ligament and the aponeurosis of the external oblique muscle on the other.

C. The deep mattress sutures are tied with the transplanted cord passing between the two sutures of the upper end.



THE HALSTED OPERATION

(Later phase)

A. Fine silk stitches engage firmly a few bundles of the cremaster muscle, perforate the internal oblique muscle and are tied on the external surface of the latter. The cord is not disturbed.

B. The edge of the internal oblique muscle and the edge of the conjoined tendon are sutured to Poupart's ligament.

C. The flaps of the aponeurosis of the external oblique muscle are overlapped from above downward and sutured well in from the edges.

D. The edge of the top flap of the aponeurosis of the external oblique muscle is sutured to the lower flap.

Notable Contributors to Our Knowledge of Syphilis

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It seems most suitable to present the subject matter of the title in a manner most unorthodox. We begin with now and seek our paths back to origins as nearly as possible. In fact, we approach our story from the future—we have the temerity to ask, "What will this world of people be when there is no syphilis?" Let imagination run riot with the answer to the question. Consider, however, it is not an impossibility. True enough, we lack one leg to our structure—a safe, certain, universally available preventive. The lack may be filled shortly. The research for the materials of war may yet bring us the eagerly awaited chemical or biological (it is possible they may be one and the same) catalyst for the symbiosis of man, and the *Spirochaeta pallida.* The partnership of no less than five centuries may yet be broken before it is formed! Or its lease be vacated within an hour or at most a day. The saving in human misery; of human happiness, if, when and as, happiness returns to our planet; the lives of children yet unborn; the sight of helpless children; all effected because the chain of infection is broken, looms immeasurably high.

Have we any guide to the possibility of a world free of syphilis? We have. A Navy medical officer, Maurice Joses, reported in the *United States Naval Medical Bulletin* the administration of sulfathiazole to hundreds of sailors after sexual exposure to gonorrhea and chancroid. These men had been unable to resist temptation. Some were in a state of intoxication. A few had other forms of prevention. Only one acquired gonorrhea after the sulfathiazole pills had been administered. He was resistant to the same group of drugs for cure. The sulfa compounds and penicillin promise to rid the inhabitants of the earth of gonorrhea. We may look forward to similar success for syphilis.

Mention of peicillin brings to mind the name of Sir Alexander Fleming. In 1929, he noted one of his culture plates had been contaminated by a mold. Instead of throwing it away, as perhaps every other student and professor of bacteriology had done, Fleming took a second look. He wrote: "It was astonishing that for some considerable distance around the mold growth the staphylococcal colonies were undergoing lysis. What had formerly been a well-grown colony was now a shadow of itself."

A decade later—Fleming's original publication was not noted—Howard Walter Florey and a group of Oxford University workers began in earnest the study of the laboratory phenomenon described by Fleming. Not too long after, Florey, Gardner, Heatley, Sanders, Jennings, Abraham and Chain produced penicillin.

In the United States, a surgeon of the Public Health Service, Dr. John Mahoney, gave the new material to a small group of recently infected syphilitics. A new era in syphilis therapy was born. Not that the wonder drug of Ehrlich has been completely discarded, but rather a new instrument with little toxicity to the patient has come to stand high in the list of antisyphilitic remedies.

Among the notable contributions to eradication of syphilis, we must count the discovery of arsphenamine, salvarsan, or 606, its variations and prototypes. Perhaps the best known name among our long list of contributors to the knowledge of

syphilis is that of Paul Ehrlich. This man of genius and inspiration to humanitarians made many contributions in the field of dyes and dyeing. He gave medicine and surgery the concept of white blood cell groups—the neutrophils, the eosinophils, the basophils. Ehrlich devised the dye test for typhoid. He measured the potency of diphtheria antitoxin. He named the gonococcus. Ehrlich stained the tubercle bacillus discovered by the country practitioner, Koch. Ehrlich failed in his studies of cancer. His work inspired Wassermann to formulate the blood test for the presence of the spirochete. But Ehrlich did not attempt to utilize arsenic as a bolt from the blue. He had precedents. Bechamp discovered atoxyl in 1863. In 1903, Thomas and Breinl of Liverpool demonstrated its utility in trypanosomiasis. This infection has many points of similarity to syphilis. Notable French authors, Uhlenhuth, Hoffman, Salmon and others introduced atoxyl into the therapy of syphilis. Hallopeau became enthusiastic and regarded the arsenical as a specific for syphilis. Atoxyl soon was found to be toxic. Its bad side results acted as distinct contraindications to its further utilization in the treatment of disease. Atoxyl was the initial point for Ehrlich—the culmination was arsphenamine.

No one worker had done all the job; each had foundations in the work of predecessors. Arsenic was tried hundreds of years before atoxyl. Since Paracelsus fed goats arsenic and then administered their milk to the newly born of syphilitic mothers, he may have been the father or the grandfather of chemotherapy!

The arsenicals of Ehrlich, however, spurred the determination of public health officers to rid the world of syphilis. Control by treatment became a reality. To treat the syphilitic and render him non-communicable became the aim of physicians with public health in view. To discover the patient with communicable syphilis was a necessity. So clinical syphilology has made great advances over the years.

It may be said that the dawn of the twentieth century had brought every clinical phase of syphilis to the attention of physicians throughout the world. The elder Fournier knew all there was to know about syphilis from the chancre to the grave. Hutchinson, Fordyce, Fox, Hebra, Dodi, physicians from all countries and of all periods had disclosed the clinical pictures. Often enough, all too often, their criteria failed in distinguishing syphilitic chancre from nonsyphilitic local lesions. Persons diagnosed as having primary or early one-focus syphilis were cured too easily to have had the disease. Other people diagnosed to have non-syphilitic local sores and untreated for syphilis had sequelae of the generalized infection. The reason was easy. The cause of syphilis was unknown. True enough, the transmission of syphilis had been recognized for hundreds of years as a person to person, or as a person to inanimate object to person, or as mother to child sequence. Not a few guesses had been made, and some of these during the modern bacteriological period. As a matter of fact, it is not impossible for Anton von Leeuwenhoek (1632-1723) to have seen and pictured the spirillum ultimately held to be the cause of syphilis.

We advance to 1905. Siegel claimed to have discovered the cause of syphilis. Few knew his name or his questionable claim to fame. More know of Lustgarten and his ill-fated bacillus of syphilis. However, a test was ordered. The Institute of Sciences at Berlin named a board of investigators. Schultze, a zoologist, called to his assistance two young men, Eric Hoffmann, a promising clinician in syphilis, and Fritz Schaudinn, a student of advanced parasitology and protozoology. Schaudinn had completed an investigation of the trypanosomiasis of fowls. With the claim of Siegel before them, the investigators made studies of all types of material from cases of clinical syphilis. They were soon satisfied the claims of Siegel were worthless. The organism claimed by him to be the cause of syphilis was found with equal frequency among non-syphilitics.

While examining material from a woman, twenty-five years of age, with active syphilitic lesions no more than ten weeks in duration, Schaudinn noted the

presence of motile spirochetes. Ultimately, these were confirmed to be the cause of syphilis. Two things made this discovery all the more remarkable. Immediately previous to his work, other investigators had concluded spirochetes were the one type of organism impossible to be considered as among those to be discovered as the cause of syphilis. We must also remember that Schaudinn utilized fresh material and an ordinary system of condensers and lenses in his microscope. Staining by Giemsa methods confirmed the observation.

The dark field or ultramicroscope was introduced a year after the discovery of the spirochete by Scaudinn through the work of Landsteiner and Mucha. They offered this refinement in 1906. Verification of the presence of the spirochetes is thus available to all laboratory investigators and clinicians. The demonstration of the *Spirochaeta pallida* is biological proof of the existence of the infection. Treatment begun on demonstration of the spirochetes is imperative. Control through treatment spells the doom of the reign of the syphilitic spirochete. The partnership between man and syphilis had been breached; the spearhead had entered, yet the end was not in sight.

Strange are the paths of science. In far off Africa, studying a disease with many similarities and an equal number of differences from syphilis, Castellani uncovered a spirochete, a spiral organism—the *Spirochaeta pertenue* of frambesia tropica or yaws. This work was antedated by the discovery of Wellman, also working in Africa. Wellman independently described the spirochete of yaws—but the means of communication from the heart of Africa to civilization was slow in those days of 1905. Hence, whether Schaudinn had or had not made his truly remarkable discovery, it was only a question of a few months, and some other scientist fired by the reports of Wellman or Castellani or both would have investigated the bacterial flora of syphilis. Noguchi and Moore closed the cycle by proving the presence of spirochetes in the brain substance of living paretics.

Nichols cultivated a strain of spirochetes variously claimed and disclaimed to be the *Spirochaeta pallida* of syphilis and pathogenic to man.

Be that as it may, Metchnikoff (1845-1916) announced the successful inoculation of monkeys in 1903. Working with Roux, this is recorded as the first successful attempt, but other investigators, notably Klebs (1879), had inoculated monkeys subcutaneously with material from chancres of humans. Further, Metchnikoff with Roux had advocated the utilization of mercury in the form of calomel ointment as a means of personal, individual prophylaxis after exposure. In 1837, an unconfirmed reference to La Nouvelle Maison Rustique offered calomel for prophylaxis of syphilis. Interesting, too, Metchnikoff, writing of the experiences of Bordet, Gengou, Levaditi, and himself, declared syphilis could not be attributed to any form of spirillum. Soon enough, after correspondence with Schaudinn, Metchnikoff was enabled to demonstrate the *Spirochaeta pallida* in apes inoculated with syphilitic material.

Perhaps the spirillum of von Leeuwenhoek was vindicated; perhaps the *Vibrio lineola* of Donne (1837); perhaps the spirillum of Berdal and Bataille (1891); that of Gaillag (1898) and Roma (1903) was each vindicated. Who can be certain the *Cytorrhyctes luis* of Siegel may not be learned to be a phase in the life cycle of the *Spirochaeta pallida?*

The discovery of the *Spirochaeta pallida* and its acceptance as the cause of syphilis closed the discussion as to the unity or duality of syphilis and other venereal disease, particularly gonorrhea. We need go no farther back than 1768. John Hunter (1728-1793), one of the greatest of savants, in a famous experiment inoculated himself with supposedly gonorrheal pus on a nonmucous surface, and acquired syphilis. He was certain on the basis of this one experience that syphilis and gonorrhea were one and the same disease. So great was the influence of Hunter, few dared to disagree. Balfour, Hales, Ellis, Bell, Duncan, Hernandez, to name a few, held opposing views but the dictum of Hunter prevailed until Ricord (1800-

1889) made 2,500 inoculations and reported syphilis and gonorrhea were separate and distinct diseases.

Neisser (1855-1916) in 1875 discovered the organism accepted as the specific cause of gonorrhea. Neisser also supervised the animal inoculation experiments on the island of Java. His name is linked with all phases of modern investigation of syphilis; its cause; its clinical and animal experimental aspects; its serology; and its cure with the arsenicals.

It was not until 1899 that Ducrey discovered the organism of chancroid named after him. But we have had no time to speak of Pasteur, of Koch, of Jenner. These and many more advanced the knowledge of bacteriology, of microscopy, of technic. Without them, there might not have been the advances of Schaudinn, of Neisser, of Ducrey. We must view our notable contributors to the knowledge of syphilis through the wrong end of the telescope—unfortunate as the view becomes. Limitation of time is the honorable excuse; limitation of knowledge is the more truthful one. Philosophically, we could go on and on—the discussion would become as fruitless as the argument as to which came first, the hen or the egg? Did the times make Hitler, or Hitler, the times? Who can say? If Von Leeuwenhoek had not placed lenses in position to create the primitive compound microscope, some other dabbler would have done so sooner or later. We were fortunate Schaudinn was called to investigate the claims of Siegel; but Wellman and Castellani would have studied the bacterial flora of syphilis once again for spirochetes—or so we imagine.

Wassermann perfected the serological test for the detection of syphilis. He was led to his investigation by the side-chain theory of Paul Ehrlich. Yet, Bordet and Gengou, Belgian workers in the field of antibody production, described a complement fixation test in 1900. Undoubtedly, it was the basis in part at least of the advance made by Wassermann. It is not surprising, though, to learn that the theory of the original test for syphilis from the study of the serum is completely erroneous. The original Wassermann, or Wassermann, Bordet, Gengou and Bruck test was based on a fallacy; there is no specificity. There is nothing in the modern counterpart of the old Wassermann test using the antigen from ground livers of dead congenital syphilitics. The wonder is the test works more often than it fails. The improvements, the variations, the substitutions for the original Wassermann serological test for the presence of syphilis have been advanced by Meinicke, Sachs-Georgi, Kline and Kahn. Each has some advantage, some disadvantage over the original test. Some tests are more specific; others more sensitive. All depends upon the technician. No test depends upon mathematical exactness despite the brave show of numerology.

The laboratory has been active in the detection of syphilis. In some measure, all too much according to die-hard clinicians, it has replaced the diagnostic acumen, skill, or inspired guesswork of the past. In great measure, the laboratory has confirmed the suspicions or the observations of the notable contributors to the knowledge of syphilis antedating the twentieth century. True enough, Hunter guessed wrong. Hunter denied the possibility of transfer of syphilitic infection from mother to child. Hunter denied the possibility of transmission of syphilis from a child born with the disease to other persons. Yet Torella (sixteenth century) was certain of transfer of syphilis between wet nurse and nursling. Cataneus, Benivenius, Brassavola, and others in the first century after the discovery of the New World wrote of infection from nurses to nurslings.

Bethencourt, in 1527, gave evidence of his observation of the transmission of syphilis from parents to offspring. Paracelsus (named Phillipus Aureolus Theophrastus Bombastus ab Hohenheim) recognized that the problem of transmission of syphilis from parents, including those with late syphilis, was greater than that of transmission of leprosy through parents. In 1529, Paracelsus suggested paternal transmission to offspring. Incidentally, they had plagiarists in those days. One Massa tried to assume credit for many of the ideas advanced by Paracelsus re-

garding congenital syphilis. Syphilis of the newborn was the topic of a book by Mattiolus (1500-1577) in 1535. Other clinicians of the sixteenth century recognized syphilis of the newborn as acquired from the parents. Fallopius (1523-1562), Paré (1510-1590), and Horst (1578-1636) gave evidence of an understanding of the transmission of the disease to the yet-to-be-born.

Many more names could be given, but we will tell of Baumès (1791-1871), famous dermato-syphilologist, proponent of the theory now recognized as erroneous, of the immunity of the mother to syphilis of her child acquired from the father. Baumès made the note, "It was strange wet nurses could be infected by such syphilitic children." Baumès preceded Colles in the statement of what has been called the Baumès Law, the Colles Law, and the Baumès-Colles Law. Colles (1773-1843) stated his observation as follows: "It is a curious fact that I have never witnessed or ever heard of an instance in which a child deriving the infection of syphilis from its parents has caused an ulceration in the breast of its mother."

Profeta (1840-1910) offered the obverse of this apparent truism: An apparently healthy child born of a syphilitic mother is immune to the disease of its mother, or that of a syphilitic wet nurse. In 1780, Fagner (1740-1785) must have known about this, for he advocated the establishment of an institution where syphilitic infants could be treated, and recommended the employment of wet nurses already infected with the disease. Mahon (1752-1801) succeeded Fagner and his co-worker, Doublet (1751-1795), as director of the Hospice de Vaugirard established on the plan of Fagner. The serological surveys made possible by the work of Wassermann have confirmed the clinical observations of these old-time physicians and public health officials.

We are very proud of the treatment of the pregnant woman for her syphilis. Centuries ago, the same thought occurred to our medical giants. Lagneau (1781-1868) proposed women with syphilis be treated with mercury by inunction. Swediaur (1748-1824) thought pregnancy was no contraindication to the treatment of the syphilitic. Doublet (1751-1795) after extensive studies introduced the systemic treatment of the pregnant syphilitic for the well-being of the unborn child. De-Raulin (1708-1784) advanced the idea that prophylaxis of congenital syphilis could be assured only by the cure of the parents before conception. Levret (1703-1780) advised in 1766 that pregnant women with syphilis be treated to insure the delivery of a healthy child. Need we go back to 1660? Mariceau (1637-1709) reported on the beneficence of treatment of pregnant women in 1668.

No prenatal blood test laws in those times, though.

Wagner von Jauregg in 1917 tried injections of tuberculin to cause relapses in the mental deterioration of cases of paresis, or softening of the brain due to syphilis. He was more successful with the inoculation of malaria parasites. Typhoid vaccine intravenously has also been utilized to produce fever bouts in the syphilitics. The hot-box or fever-engendering high frequency or radio waves have also found a place in the treatment of the clinical mental case due to syphilis. For centuries past, fumigation was practiced. Over the minor craters of volcanoes are still to be found the huts for the hot air and the brimstone vapors utilized in centuries past for the syphilitics. There are formulas extant as to amount of saliva per day a syphilitic must eject under the influence of mercury and heat to be declared cured.

The apparent, and in fact actual, immunity of syphilitics in communities with endemic malaria to central nervous changes has been known for many years. Recently some clinicians have sought to bring this geo-medical knowledge into practice. Alternating with injections of chemotherapeutic arsenicals more or less according to the formula of Paul Ehrlich, the syphilitic is subjected to fever induced by one or another physical or biological tool. Time alone will tell of the efficacy of these measures—and time cannot be hurried.

One word must be interjected at this

place, one word regarding the possibility of spontaneous cure—cure of syphilis without treatment. Bruusgaard (1869-1934), Norwegian physician, dermatologist and pathologist, reported in 1929 that 27 per cent of a group of patients who had never received anti-syphilitic treatment had been spontaneously cured both clinically and serologically. Of course, we must be certain these people had syphilis. Bruusgaard was certain. And it is telling no tales out of school to recite the rumor that a similar study was once under way in our country under the most scientific auspices. But, it is safer by far to be treated!

The time has come to review briefly the problem of personal or individual prevention. Of course, no prevention was possible or feasible during the period when the learned men were star gazers, astrologists, and whatnot. Widman (1440-1524) derided the astrological theories of the causes of the French disease. Widman recognized that the disease was acquired by intercourse with prostitutes. He offered, as a method of prevention, not only the avoidance of contact with pustulous women, but also women who had cohabited with pustulous men. Torella advocated personal prophylaxis in 1500. He published a dialogue between physician and patient in which warning is given against quacks—nothing new under the sun, is there? Gallinus in 1497 wrote, "There is one thing above all others of which I am certain, and that is this disease [syphilis] is contagious." Gallinus stressed avoidance of contact with an infected woman as a prophylactic measure. Almenar (early sixteenth century) offered a method of prevention of syphilis by application of wines and various simples. He recommended avoidance of contact with an infected woman or her articles of clothing. Cataneus (in 1532) advanced as prophylactic measure the avoidance of contaminated women and the application of mercury. Shades of Metchnikoff! Fernel (1506-1588) mentioned in 1548 that syphilitic virus (he coined the term) could not pass through the unbroken skin! He recognized that a break in continuity was necessary. Have we advanced much in 400 years?

This section will be closed with an account of a very early study in epidemiology—the study of outbreaks. Lusitanus (1511-1561) is said to have reported an epidemic of syphilis with a congenital syphilitic child as the point of departure. The third child of an apparently cured syphilitic, seven years after marriage, infected his wet nurse. She, in turn, infected her husband and two children of neighbors. The mothers of the children became infected in their turn; their husbands soon enough; and so on.

The public or social prophylaxis of syphilis will next be summarized for its historical aspects. Emperor Maximilian publicized the mandate or edict of August 7, 1495. The disease was described as Basen Blattern or the Evil Pox, and regarded as a new and never-before-seen-or-heard-of disease. General prophylaxis was offered, as was common at the time for the prevention of the spread of leprosy.

Diaz de Isla (1462-1542) advanced public prophylaxis by advocating confinement of all prostitutes for 12 months of their infectious period. He proposed that physicians in each town, village and hamlet be adequately acquainted with the new disease so they could properwly undertake the care of the infected. The principle of the care for the prostitutes included examination, hospitalization of the diseased, and the certification of the well.

Leveque wrote: "The obvious infectiousness of the early lesions on the body surface was made the subject of some of the first public ordinances to control the spread of syphilis when the *Archives d'aix en Provence* (1496) ordained . . . suggeons and barbers were not to shave those afflicted with the disease for fear that with the same razor they communicate it to others." For the next three centuries governments sought to drive the syphilitics from their own territories into those of their neighbors; all in vain. Syphilis knew no boundaries—no distinctions.

It was left to Alfred Fournier (1832-

1915) to call attention to the public prophylaxis of syphilis as a problem for the physician, the social worker, and the health official. England, the United States, and the countries of the northern peninsula formed societies to combat the entrenched disease. Social hygiene societies waxed strong and powerful; exerted pressure; brought legislation before the citizens and soon enlisted governmental financial aid. Reduction and ultimate eradication of syphilis has been mandated by the Congress of the United States. Since 1935, money has been appropriated for the control of venereal diseases by the states through the United States Public Health Service. The past five or six years have brought improvement—have made it possible to train health officials, physicians, nurses and the public. It has been fortunate in more ways than one. The war—brought to our shores, to our very homes through the operation of the Selective Service System—found our country prepared in the effort to preserve the health of our people from the contagious, infectious, communicable venereal diseases including syphilis.

War. War brings the next section of this paper—the influence of war, the growth of syphilis during war, the effects of the late wars and consequent syphilis among our people. It was a war immediately after the return of Columbus from the newly discovered lands which was the cause of the widespread ravages of the new disease.

Charles VIII (1470-1498) in March of 1494 is reputed to have invaded Italy and some time about February 20, 1495, to have been before Naples. It is claimed Charles and his army left Naples May 20, 1495. His army consisted of not more than twenty to thirty thousand troops on the way into Italy—only nine thousand left. Many of the soldiers were killed or died on their way to their native lands. Was the disease, syphilis, responsible for their deaths? Was it typhus? Or typhoid fever? Take your choice! Brandt (1457-1521) believed the soldiers of Charles VIII carried syphilis into Italy. Scillacio (in 1495) indicated the disease had appeared in Barcelona simultaneously with the Naples outbreak. Grunpeck (1470-1532) felt the English soldiers in Italy spread the disease. It is claimed Marcellus actually saw the earliest cases at the battle of Fornovo, July 6, 1495. As surgeon in the army of Charles he had the opportunity: was he competent to decide? Many authorities deny the tale. To them the entire Charles VIII episode is imaginative.

Far from imaginary, though, are the figures from Part One of the World War —the 1917-1919 section, in which troops from the United States were engaged or preparing to be engaged. Syphilis and the other venereal diseases were costly, all too costly. The figures are fantastic. Millions of days lost through disabling features of the preventable diseases, syphilis and gonorrhea. Wars do things to people. Wartime is a difficult time, particularly to the young. Syphilis and gonorrhea thrive on the very things we need to make men soldiers and women soldiers, too—soldiers of the industrial army. This all of us must recognize. We must recognize not only the problem but the care, the prevention, the public prophylaxis, the personal prevention. There is a realistic and a dream state for this problem. According to your individuality, you respond to the immediate need by the remedies at hand. Some would have prostitution legalized, or, let us say, recognized. Who would wish to see any of his own people enlist in the army of legalized prostitutes? Others favor abolition of the recognition of prostitution and the institution of measures of repression of prostitution as a business, a sub-legal business. Still others would utilize every means for the reduction of the temptation of exposure to sexual disease contagion, and the substitution of non-sexual adventures for the youth of our country. And there are yet others who would utilize any and every method; who would no more stop at physical or chemical individual prophylaxis to insure a healthy man for war, than they would stop at anti-tetanus injection for a wounded person. This is war, they always declare. There are no rules in this war! The winner isn't going to give back the marbles. This is not a moving picture war. The hero dying for

the war-of-today will not step before the curtain to make a personal appearance at the close of the show. He stays dead. The diseased soldier, the man with venereal disease, the person with preventable contagious venereal disease, is a burden to our effort at war or during peace between wars.

Whence came this disease, syphilis? Did Columbus actually take it from the new world to the old? Could the forty members of his crew and the six Indians he took to Spain have actually spread the disease to the continents of the old world? Was Martin Alonzo Pinzon, the pilot of the Palos, actually the first European syphilitic? Was there no disease known to Europe, to Asia, befitting the description of syphilis as we have come to know it? Is the lack of evidence in bones disinterred from mummy cases of ancient Egypt, from mounds of old Japan, or pre-Columbian cemeteries in European capitals to be taken as indicating the total absence of syphilis from the peoples of these places? Have the ancient burial places on the hemispheres of the new world disclosed unquestionable proof of the existence of syphilis among those buried in them prior to the coming of Columbus to these shores?

Details of the arguments pro and con would take hours and hours. No one would be convinced of the view opposing his own. Butler has suggested a middle way—a disease in Europe and one in the New World. Who can say him nay? Or may not a disease among the aborigines of Central America, of the Caribbean (frambesia tropica, or bubas), have become syphilis in one generation among Europeans? The spirochetal organism, the cause of each, is close in form and structure, practically indistinguishable except by biologic study. What have the ancient tomes of the philosopher physicians of pre-Columbian days to say about a disease contracted by sexual contact; having a period of incubation; the appearance of a single ulcer at the point of entrance; a second incubation period; and then a generalized eruptive and systemic disease; having yet another incubation period and a revival of symptoms of skin, bone, muscle, nerve tissue? Your learning and your leanings determine the answer. Its origin shrouded in mystery, its future unassured, let us, in the present, face the problem of syphilis with weapons forged for us by those preceding us; with the tools fashioned by the great men of all centuries since 1500; with the diagnostic bacteriological gains brought us by Fritz Schaudinn, Eric Hoffmann, Landsteiner; with the serological tests of Wassermann, Kahn and Kline; the colloidal gold reaction for detection of involvement of the brain and spinal cord devised by Lange; with the therapeutic measures of Paul Ehrlich and of Wagner-Jauregg. Let every citizen resolve, each for himself, to have a physical examination; to have blood tests for syphilis; to undergo treatment until cured, if found infected. If this century goes into history as preeminently the one of errors due to war, let it likewise spread the tidings of the successful loss of syphilis. If we do not know for certain the name and station of the first syphilitic—let history record the last!

A review of the past has only this to recommend it: it explains the present a little. It points the path to tomorrow, for those with faith in a tomorrow!

18 East 89th Street

The Federal-State Hospital Program

Regulations governing the nationwide Federal-State hospital construction program were recently issued by Surgeon General Thomas Parran of the United States Public Health Service, Federal Security Agency. The Program was created by the Hospital Survey and Construction Act, enacted August 13, 1946.

The Act permits appropriations up to $3,000,000 to assist States in surveying and planning their hospital needs, and $75,000,000 annually for the next five years to assist in the construction of hospitals and health centers. For administration and surveys $2,350,000 has been appropriated.

CONTEMPORARY PROGRESS

OBSTETRICS

Successful Treatment of Hydramnios With Ammonium Chloride

A. A. ABRAMS and S. B. ABRAMS (*American Journal of Obstetrics and Gynecology,* 52:299, Aug. 1946) report the use of ammonium chloride in the treatment of hydramnios. As hydramnios often occurs in the sixth to eighth month of pregnancy, it is sometimes impossible to deliver a living child; and if the child is living, it may be a monster or show some less severe psysical or mental handicap. Ammonium chloride administered at a time when the hydramnios is first discovered has given prompt relief to the mother and has resulted in the delivery of a normal child at term. Two illustrative cases are reported. In the first case the diagnosis of hydramnios was made in the seventh month of pregnancy. Ammonium chloride was given in enteric coated tablets in a dosage of 90 grains daily (four 7½ grain tablets after each meal) for seven days. This resulted in a reduction in the patient's weight and in the size of the uterus. The patient was delivered at term of a normal child. In the second case the diagnosis of hydramnios was made at five and a half months; the uterus was enlarged out of proportion to the size of the fetus. Three weeks later ammonium chloride was given in a dosage of 75 grains daily for a week, which resulted in a reduction in the size of the uterus. The progress of the pregnancy was entirely normal after this time and a normal child was delivered at term. No ill effect of ammonium chloride was observed in either case. The authors note that they have also used ammonium chloride with good results in cases of excessive weight gain in pregnancy with or without edema. They are convinced that ammonium chloride should be given a much wider clinical trial in pregnancy when there is any possibility of hydramnios or an excessive gain in weight.

COMMENT

The authors' very first statement, viz.: "Hydramnios constitutes a serious obstetric problem for which there has been no adequate treatment" is characteristic of their entire discussion. One must qualify such a statement, otherwise it is not always true. If excessive hydramnios or polyhydramnios is meant we agree, but there are certainly varying degrees of hydramnios; some serious; others are not. We all know that proper diet and control of weight gain reduce or eliminate the edema that is so common during pregnancy. There is grave question whether these factors have anything to do with hydramnios—either in its production or reduction. Likewise we do not believe, although we cannot adduce the proof, that ammonium chloride reduces or prevents hydramnios—particularly where the liquor amnii is excessive. There has been no evidence to prove that increased urinary output reduces hydramnios nor that the same factors that produce edema in pregnant women are the same that produce hydramnios. We do not know what causes hydramnios and until we do know this commentator doubts if there will be found a cure. The only successful treatment we now know about is that of Rivet of London, who draws off the excess liquor amnii with a trocar and cannula. This does not cure because in some cases the withdrawal process has to be repeated; however, it does give much desired relief. How ammonium chloride can eliminate from 2,000 to 10,000 cc. of fluid from the amniotic sac is not quite clear and the authors do not tell us. It may have a prophylactic action, but of this we have no proof. Research is always commendable and I am strong for it. However, the records of only two cases are not to be construed as proving anything. We hpe, as the authors have promised, that in the near future they will give us more concrete data—let us say after studying fifty to 100 cases of hydramnios (polyhydramnios)—on the etiology and treatment of this troublesome condition.

H.B.M.

High Protein, Low Caloric Diet for the Prevention of Toxemia

RALPH LUIKART (*American Journal of Obstetrics and Gynecology,* 52:428, Sept. 1946) reports a regimen of rigid weight control in 1000 pregnant women, who were of normal weight when first

seen, whose blood pressure was not above 130 systolic and 80 diastolic, and who were "organically sound" as far as could be determined. The aim of the regimen was to restrict total weight gain to 16 pounds or less during the entire pregnancy, and the maximum gain in any one month to 2 pounds. This regimen was adopted because of the occurrence of toxemia in a certain proportion of cases of excessive weight gain in pregnancy. The protein content of the diet is high, with meat (beef or lamb) or fish once a day, liver once or twice a week, and one or two eggs daily; two servings of cooked, green vegetables daily are also included. An excessive amount of fruit is to be avoided; starches, sweets and fats are added in limited amounts. If the patient shows a gain of more than one pound in two weeks, the amount of starchy foods (potatoes, bread, macaroni, etc.) is reduced, but not the amount of meat or cooked vegetables. If the weight gain is not excessive skimmed milk may be taken with meals. Extra calcium is given daily, preferably in the form of a bone phosphate to equal the amount in a quart and half of milk, with sufficient vitamin D to ensure utilization of the calcium. Weight and blood pressure are checked once a month; the blood should be frequently examined to discover any tendency toward anemia, although with the type of diet used anemia is usually avoided. Occasionally a patient complains of hunger on this dietary; in such cases benzedrine sulfate may be given in doses of 5 mg. three times a day, if it does not cause nervousness. Thyroid extract is given if the basal metabolic rate indicates its use. Of the 1000 women who followed this regimen during pregnancy none developed toxemia, pre-eclampsia or eclampsia; and all were delivered without a death. The fetal mortality in this group was one-sixth that of the fetal mortality in a group of 366 patients under observation at the same time who were not under dietary and weight control. The average weight of infants at birth in the controlled group was slightly less than 7 pounds, and there were no abnormally large infants.

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Comment

Today diet during pregnancy is the obstetrician's greatest prophylactic weapon against the development of toxemia. Never before has the doctor who does obstetrics ben instructed, advised and castigated more about diets and weight gain during pregnancy. Yet there are still many physicians who pay little or no attention to the diet and weight control of their obstetric patients. Why is this? We are sure that the severe toxemias of pregnancy, provided, of course, the woman was in good health at the beginning of pregnancy, can be prevented by adequate prenatal care—largely through proper diet from the beginning of pregnancy. Severe pre-eclampsia and eclampsia have practically been eliminated from our prenatal clinic, and in private practice we have not had a case of eclampsia in over twenty years (July, 1923). Keep the weight gain at or below 20 to 25 pounds, particularly in the obese woman, and the general health of the mother is improved or kept stable, and labor and delivery are accomplished more satisfactorily; as a consequence convalescence is more rapid.

H.B.M.

The Effect of the Anticoagulants On Postpartum Bleeding

A. C. BARNES and H. K. ERVIN (*Surgery, Gynecology and Obstetrics*, 83: 528, Oct. 1946) report a study of the effect of dicoumarol and heparin on the postpartum blood loss in a small group of patients with normal controls. This study was undertaken because of the known incidence of postpartum thrombophlebitis and phlebothrombosis and the possibility that the use of these anticoagulants might be of advantage in the prevention of this complication. The controls in the dicoumarol group showed marked elevation of prothrombin level, which has previously been observed in the normal postpartum patient. Dicoumarol was given to 14 patients in a dosage sufficient to depress the prothrombin level to the therapeutic range, dosage after the first two days being adjusted according to the prothrombin determinations. In the heparin treated group, the controls showed normal clotting time; heparin was given to 5 patients in a dosage sufficient to prolong clotting time for a twenty-four hour period on either the first or second postpartum day. There was no increase in puerperal blood loss as compared to the controls in either the dicourmarol or the heparin treated group. This study indicates that the use of heparin and dicourmarol is not contraindicated for the prevention of thrombophlebitis in the postpartum period, provided that the usual precautions in their administration are carefully observed. The weaning of the infant during prolonged dicoumarol therapy should also be considered, as bleeding and clotting times of nursing babies were prolonged in some instances while the mothers were under dicoumarol therapy.

Comment

We have had no personal experience with the effect of anticoagulants on postpartum bleeding. This study, however, indicates that the use of heparin and discoumarol is not contraindicated in the prevention of postpartum-phlebitis and phlebothrombosis, provided the usual precautions in their administration are carefully observed. Since the authors apparently performed this piece of research in a strictly orthodox manner we feel their conclusions are justified and, therefore, we would have no qualms in using their technic if and when indicated. We need more such studies because there is no postpartum complication that is more disconcerting to both physician and patient than thrombophlebitis and phlebothrombosis, particularly the former. The physician is almost sure to have one less patient if not a lawsuit in addition—we did not so long ago in a case of easy breech delivery followed by double thrombophlebitis.

H.B.M.

Hemorrhage in the Viable Period of Pregnancy

R. L. BARRETT (*Bulletin of The New York Academy of Medicine*, 22:428, Aug. 1946) states that both the records of the U. S. Bureau of the Census and of the Department of Health of New York City show a definite reduction in maternal mortality in the last few years. This reduction is due chiefly to reduction in the number of deaths due to sepsis and toxemia. Hemorrhage is now a major cause of maternal mortality. Many of these deaths are preventable by proper antenatal and obstetric care. Any vaginal bleeding during the viable period of pregnancy requires immediate attention and preferably hospitalization. When the patient first presents herself for antepartum care, she should be given a thorough physical examination and blood taken for the Wassermann test, determination of the hemoglobin, blood typing and Rh-factor determination; if the patient is Rh-negative, it is important that only Rh-negative blood should be used for transfusion. If vaginal bleeding occurs, examination should be made under aseptic precautions. If the bleeding is due to cervical erosions or small ruptured varicosities of the cervix, treatment consists in rest, occasional packing, or superficial electrocoagulation. If cancer of the cervix is found in the viable period of pregnancy, the patient should be delivered as soon as possible by Cesarean section, preferably the Porro operation; and the cervical carcinoma treated by radiation therapy four to six weeks later. Placenta previa is one of the major causes of severe hemorrhage in the viable period of pregnancy. Painless bleeding, which may be slight or profuse, is the earliest sign of

placenta previa. The patient should be hospitalized at once and prepared for delivery before the vaginal examination is made. If a so-called complete or central placenta previa is found, delivery by cesarean section is indicated, for which the author, in agreement with many other obstetricians, prefers the low flap type of operation. In less complete placenta previa various methods of delivery have been employed, but the author prefers cesarean section in these cases, unless cervical dilation is well advanced, particularly in multipara, when the method of treatment employed is simple rupture of the membranes and vaginal delivery. Only occasionally, when bleeding is very slight, is expectant treatment of placenta previa indicated, if the patient remains in the hospital under constant supervision. In premature separation of the placenta, external bleeding may be slight, but the patient shows evidence of shock out of proportion to the visible bleeding; pain results from increased uterine tension. The administration of glucose, plasma and blood to combat shock is indicated, and opiates to relieve pain, before any method of delivery is attempted. The author prefers cesarean section in all the more severe cases of premature separation of the placenta, and in many of the less severe cases, especially in primigravidas, if the condition of the cervix seems unfavorable for prompt vaginal delivery. Vaginal delivery, when indicated, is carried out by rupture of the membranes with fractional repeated doses of anterior pituitary extract or pitocin, with or without insertion of a hydrostatic bag. Anterior pituitary extract and ergotrate are given routinely after delivery in either method; tight uterine tamponade with heavy iodoform gauze is used if indicated. If the hemorrhage cannot be controlled by these measures, abdominal hysterectomy is indicated, but this has been necessary in only a small group of cases with a severe type of uteroplacental apoplexy. Both in placenta previa and premature separation of the placenta, blood transfusions are indicated not only during but following delivery.

Comment

Hemorrhage in the viable period of pregnancy is a major couse of maternal morbidity and mortality. Previously sepsis and toxemia were considered far more important, but with better obstetrical practice generally these causes have been greatly reduced. Prenatal care and chemotherapy are largely responsible, and when coupled with better obstetric judgment and improved technics the answer is evident. With hemorrhage and its sequelae, however, there has not been an increasing advance in the knowledge of prevention and management. This is perfectly obvious because, for example, we cannot prevent placenta previa nor do we make the diagnosis before bleeding occurs. There is always one episode of bleeding and this can be severe or fatal. Blood transfusion must be performed promptly and in replacement amounts. Today we give from 500 to 2,500 cc. when circumstances warrant. All cases of prenatal bleeding, except early threatened abortion, require hospitalization where a diagnosis of the cause of the bleeding should be made and a plan of management mapped out. Procrastination often leads to disaster in the bleeding of late pregnancy. There are several schools of thought as to management, but the point here is to choose a method and "sit on the job." Always be ready to treat hemorrhages and/or shock—promptly and adequately. Read this article—it is full of good advice!

H.B.M.

GYNECOLOGY

Prevention and Treatment of Carcinoma of the Vulva

B. P. WATSON and S. B. GUSBERG (*American Journal of Obstetrics and Gynecology*, 52:179, Aug. 1946) report 30 cases of cancer of the vulva. In 8 cases vulvectomy was done; the authors consider that simple wide excision is the best method for biopsy of vulvar lesions, and that if the growth proves to be a basal-cell lesion or a squamous-cell lesion of borderline or potential malignancy (such as Bowen's disease), this operation is sufficient. In the 8 cases in which simple partial vulvectomy was done, none of the patients have died of the disease. In most cases of carcinoma of the vulva, the authors consider that complete vulvectomy with bilateral groin dissection is the operation of choice. A one-stage operation is done with dissection of the superficial in-

guinofemoral nodes and removal of all the vulvar structure. In 8 cases in which bilateral groin dissection was done, no carcinomatous involvement of the lymph nodes was found in 4 cases; the nodes in both sides were involved in one case; and the nodes on one side in 3 cases. In the 4 cases in which unilateral dissection of the groin was done, the nodes were not carcinomatous in 2 cases and were involved in 2 cases. Of the 6 patients with gland metastases, 4 are living, but only 2 of these have survived three years; the 2 early deaths include one patient who showed vaginal involvement at the time of operation; and one who died from intercurrent disease. A study of the fatal cases shows that when there is vaginal involvement, the prognosis of vulvar carcinoma is very unfavorable. In 2 cases in which death was due to vulvar carcinoma, without vaginal involvement, treatment was inadequate because of the age and general condition of the patient. There was only one death when the lesion was confined to the vulva and complete operation was performed; in this case pathologic examination showed no involvement of the inguinofemoral nodes. Prevention of vulvar carcinoma is most important; any irritated or ulcerated lesion of the vulva that does not heal with simple therapy in "a very short time" should be submitted to biopsy. Any leukoplakic area that causes itching necessitating scratching for relief should be excised, and wide excision, including all vulvar structures, may be necessary.

Comment

Prevention is the order of the day in medical practice. Prevention of cancer is certainly foremost. What the authors say about prevention and treatment of carcinoma of the vulva we can agree with 100 per cent. We would particularly like to stress that any itching, irritated or ulcerated lesion of the vulva that does not heal with local therapy in a very short time should be submitted to biopsy. Also any leukoplakic area that itches (more or less constantly), no matter how small, should be widely and thoroughly excised. Read this article—it will help you "save a life" through the proper management of lesions of the valva. There is generally too little emphasis placed on simple vulvar lesions.
H.B.M.

Absorbable (Oxidized) Gauze As a Hemostatic Agent in Gynecologic Surgery

W. E. STUDDIFORD (*American Journal of Obstetrics and Gynecology*, 52:495, Sept. 1946) reports the use of absorbable gauze for the control of bleeding in 30 gynecologic operations, 15 of which were abdominal operations. In 9 of these cases it was used to control oozing from raw surfaces of the pelvic peritoneum, in 4 to control retro-peritoneal bleeding, in one case during operation for secondary abdominal pregnancy, and in another to control oozing from the incision after myomectomy. In these cases the gauze was applied directly to the bleeding area with momentary digital pressure. In most instances the bleeding was successfully controlled by this measure alone; in a few cases in which bleeding recurred after the removal of digital pressure, ordinary gauze packing was placed on top of the absorbable gauze. This was removed in twenty-four hours without recurrence of bleeding. Absorbable gauze was also used in 7 vaginal operations (vaginal plastics and cervical amputations); in 1 case to control bleeding from the crater of a carcinomatous cervix; and in 1 for bleeding from a biopsy wound. In cases in which the application of the gauze under digital pressure was not effective, plain gauze packing was used to maintain the pressure effect. In 2 of these cases in which the bleeding was not successfully controlled, the absorbable gauze was not applied directly to the bleeding vessel; hence the failure is to be attributed to faulty application. Absorbable gauze was also used to control secondary vaginal hemorrhage in 6 cases, occurring eight to fifteen days after vaginal plastic operations or after abdominal hysterectomy. In these cases plain packing was used after application of the absorbable gauze. In all cases the bleeding was successfully controlled, although they were of the type in which vaginal packing alone had previously failed to control bleeding and ligation of bleeding vessels and resuture of the disrupted area had been necessary. In none of the cases was there any evidence of a reaction due

to the presence of the absorbable gauze in closed cavities.

COMMENT

The use of absorbable gauze for the control of ooze bleeding is an excellent adjunct to modern surgery. Certainly there are times when oozing is "profuse" and must be controlled before the operation is finished and absorbable gauze can be the answer. Furthermore, it saves time because it takes only a moment to decide to pack the cavity or bleeding area with absorbable gauze and feel safe—it's grand to feel sure after a tedious case with troublesome oozing. We have had no personal experience with absorbable gauze but we have observed a surgical colleague use it several times with gratifying results. I'm prepared and looking for a case to use it in—all the while hoping I will not find it.

H.B.M.

Penicillin in Acute Inflammatory Diseases (Non-Venereal)

W. N. JONES (*Southern Medical Journal*, 39:646, Aug. 1946) reports the use of penicillin in the treatment of acute pelvic inflammatory disease in 30 cases; neither smears nor cultures were positive for the gonococcus in any of these cases. In 8 cases the pelvic infection resulted from septic abortion and in 22 cases developed from a chronic focus in the lower genital tract, usually the cervix. In 10 cases the causative organism was not determined; in 13 cases a streptococcus was isolated, in 6 cases a staphylococcus, and the tubercle bacillus in 2 cases. In the 8 septic abortion cases there were 2 deaths; one case was complicated by miliary tuberculosis, and the other by multiple encapsulated abscesses from a mixed infection with streptococci and staphylococci. In the other 22 cases there was one death, due to tuberculosis salpingitis and peritonitis; this was the only case in which surgical drainage was required. Penicillin is known to be effective against the gram-positive organisms which commonly cause pelvic inflammatory disease, but it is not effective against the tubercule bacillus. In this series it was found to be especially effective against *Staphylococcus aureus* infections, which responded satisfactorily to a total dosage of less than one million units of penicillin. The early use of penicillin in pelvic inflammatory disease tends to reduce the incidence of pelvic abscess and the necessity for surgical drainage. Nine of the patients in this series were thought to be developing pelvic abscess at the time of admission to the hispital, but under treatment with penicillin, pelvic abscess developed in only one instance, and this was found to be a tuberculous infection. Gram-stain examination of smears from the vaginal and cervical discharge is of most value in determining the indications for penicillin therapy. Cultures are, of course, more reliable in determining the causative bacteria, but if penicillin is given promptly in cases showing gram-positive infections, the patient may be well before cultures are completed.

COMMENT

Treating acute pelvic infections today is far simpler than "in the old days"—simpler for the physician; much better for the patient. Whereas formerly many of these patients were confined to bed for weeks (even months), with modern chemotherapy only a few days are required. Furthermore, there is little or no residual pathology left behind requiring operation later. The recent graduate in medicine cannot have the least conception of what pelvic inflammatory disease could do to the patient who had a virulent infection with no specific therapy to "kill off" the infecting organism. The quick and efficacious work of chemotherapy is almost unbelievable to the "oldster" who formerly had to treat pelvic infection solely by empiric methods. And just think how much more fortunate the present-day woman is who has such an infection, particularly if the infecting organism is gram-positive. With penicillin she will, in most instances, be well before the bacterologist can report on the type of causative organism. What a contrast to the outcome of pelvic infection before the days of chemotherapy. Time marches on!

H.B.M.

Dysgerminoma of the Ovary

W. C. CUSTER (*Surgery*, 20:520, Oct. 1946) reports a case of dysgerminoma of the ovary in a girl twelve years of age. The only symptom was a palpable mass on the left side of the abdomen; beginning development of secondary sex characteristics was normal for the girl's age. A preoperative diagnosis of ovarian cyst was made; at operation a large mass was found replacing the left ovary, which was discrete and firm; it was not adherent to or

infiltrating any of the abdominal viscera. Both tubes, the uterus and the right ovary were normal; the mass was removed and found on pathological examination to be a dysgerminona. The patient has been entirely well for eighteen months since operation. A review of the literature and the author's own experience with dysgerminoma of the ovary lead him to conclude that if the tumor shows no extension and is not adhesive to other structures, complete surgical removal results in cure. If it has produced abdominal fluid, adhesive reactions to other structures or actual extension, surgical as well as x-ray therapy does not effect a cure. Dysgerminoma of the ovary is to be regarded as a malignant tumor, the only hope of cure being early diagnosis and operation.

COMMENT

Any solid or semi-solid tumor of the ovary should be viewed with apprehension. Careful microscopic examination is imperative. Dysgerminoma is no exception. Individual experiences with this tumor are so few that it is only through "pooling of cases" that sufficient knowledge can be acquired to really know the "last word" in the management of these tumors. From our limited experience we cannot agree entirely with the author's conclusions. As Novak points out, these tumors evidently belong to the malignant group yet in the early stages at least they do not exhibit, certainly not clinically, true malignant characteristics. Remember! Always be apprehensive when you have a solid or semi-solid tumor of the ovary. Your pathologist is the proper consultant. Get him quickly!

H.B.M.

OPHTHALMOLOGY

Use of the Berman Locator in Removal of Magnetic Intra-ocular Foreign Bodies

L. P. GUY (*Archives of Ophthalmology*, 36:540, Nov. 1946) reports the use of the Berman Locator at the New York Eye and Ear Infirmary. Roentgenologic localization of foreign bodies in the eye is valuable and should always be employed when available. But the Berman Locator can be used successfully when facilities for roentgenologic localization are not available. With roentgenologic methods, the localization may occasionally be sufficiently at fault to result in failure of removal of the foreign body. The use of the Locator in the operating room makes it possible to correct such errors. The Locator also indicates whether the foreign body is magnetic and approximately to what degree. When the foreign body is located within or close to the sclera and when complete exposure of the surface of the globe is possible, the technique for localization is simple. The tip of the sensitive probe of the locator is passed over the suspected area, until the approach to the foreign body is indicated by the rise of the needle on the indicating meter, or the rise in the pitch of the sound from the built-in loud speaker. The point where the "peak indication" is obtained indicates the spot for the incision. In using the Locator the probe is not held by the handle, but close to the tip and the tip is pressed into the tissues directly with the forefinger. When the foreign body is situated far posteriorly or complete exposure of the affected area is not possible, the technique is somewhat more difficult, but localization can be made as rapidly as with the simpler cases. The Locator can also be used to determine whether the foreign body is located in the tissues of the orbit and not in the eye itself. In the use of the Locator for over two years, the author and his associates have found it to be "absolutely accurate."

COMMENT

The x-ray localization of foreign bodies in the eye has been a tremendous success which only those who practiced ophthalmology before the Dixon and Sweet methods came into use can appreciate.

The description of the Berman Locator almost taxes credulity but there is no doubt of its being all that is claimed for it. It will soon be found in every operating room along with the electromagnet.

R.I.L.

Retinal and Choroidal Arterioles in Malignant Hypertension

F. R. MANLOVE (*Archives of Internal Medicine,* 78:419, Oct. 1946) reports a pathological study of the retinal and choroidal arterioles in 15 cases of malignant hypertension; the known duration of the disease in these cases varied from five weks to sixty-nine months; 10 of the patients complained of visual disturbances during life; and all had showed the retinopathy of malignant hypertension. In these cases histological study showed that intimal proliferation was frequent and extensive in the arterioles of the choroid, but occurred only rarely in the arterioles of the retina. Medial thickening due to hypertrophy of the muscle cells occurred in the retinal and choroidal arterioles in every case; in the retinal vessels, but not in the choroidal, this was a factor in decreasing the lumen. Hyaline degeneration was frequently seen in the arterioles of the choroid. Retinal lesions, other than those of the arterioles, were found chiefly in the area around the nerve head; edema of the nerve head and of the peripapillary portion of the retina was present in every case. Retinal hemorrhage and exudates were present in most cases. It was impossible to demonstrate any relationship betwen the pathological changes in the retinal arterioles and the other retinal lesions. In several cases in which hemorrhages and exudates were numerous, the retinal arterioles showed only medial thickening of relatively slight degree. The wall-lumen ratios of the arterioles of both the retina and the choroid were definitely decreased as compared to normal values.

Comment

We have but recently recognized the fact that most fundus lesions begin in the choroid and may reach an advanced stage before the retina is seriously involved; in other words, before vision is affected. This is especially true of the lesons of senility and presenility. Detachment of the retina is undoubtedly a secondary effect of choroidal pathology. From the standpoint of the ophthalmoscopist and the pathologist, the pigment layer of the retina is so closely associated with the lamina of Bruch and the choriocapillaris that they are referred to as a unit under the title of tapetum. It occasions no surprise to read in this article that the changes in the choroidal vessels and those of the retina are independent of each other. The surprising fact to the ophthalmologist is the degree to which the very common senile atrophy of the tapetum progresses with but little complaint by the patient. Most of the peripheral fundus may show the deep choroidal vessels in an advanced state of sclerosis and be clearly seen with the ophthalmoscope but as long as the macular area retains its tapetum, vision is but little affected. This is difficult to explain because the pigment layer of the retina is so important in the development of the eye and its physiology that this visible alteration would seemingly indicate a serious loss of function.
R.I.L.

"Blue Haloes" in Atebrin Workers

IDA MANN (*British Journal of Ophthalmology,* 31:40, Jan. 1947) reports 6 cases of an eye condition in workers employed in the manufacture of atebrin in an atmosphere that often contained clouds of very fine atebrin dust for short periods.

These men had worn protective clothing, goggles and masks, but in spite of this they noted yellow staining of the conjunctivae and the skin, especially face, neck and hands. None of these men had developed dermatitis or other signs of sensitivity to atebrin. The only visual symptom noted was that when looking at a small source of light at night, they saw a blue halo around it. There was no photophobia, pain or lacrimation; and no diminution in visual acuity had been noted. Examination showed the vision to be 6/6 with full fields in both eyes in all these cases. On slitlamp examinations, the condition was essentially the same in all 6 patients, but of more advanced degree in some than others. There was a diffuse yellow stain in the conjunctiva only in the interpalpebral space. At the limbus in the exposed portion and just under the edge of the lower lid, there were very small dark brown dots; these dots appeared to be an actual deposit as they were not movable and could not be washed off. The whole surface of the cornea was "peppered" with fine particles that appeared dark yellowish brown by direct illumination and opaque by transmitted light. Across the lower part of the cornea there was a series of wavy yellow lines, which

were composed of close aggregation of dots similar to those scattered over the rest of the cornea, but a brighter yellow. There was also some diffuse yellow staining similar to that in the interpalpebral space of the conjunctiva. It seems that the punctate deposits in the cornea are the cause of the haloes observed, and that these haloes are produced by a diffraction effect. If the men who developed these haloes were put on other work where they were not exposed to atebrin dust, the haloes disappeared. No permanent damage to the eye resulted.

COMMENT

An interesting observation illustrating what a thorough scientific piece of work should be.
R.I.L.

Regarding Goniophotography

R. R. BARRIS and R. V. BARRIERRE *(American Journal of Ophthalmology,* 9:49, Jan. 1947) describe the method employed for goniophotography. Goldman's contact lens and Haag-Streit's slitlamp are used; a Leica camera, provided with Leica's microscopic device, takes the place of one of the oculars of the corneal microscope. The usual technique for studying the anterior-chamber angle is carried out, and then the Leica camera is focused. The lens of the lateral visor is focused so that the lines are sharp and clear; then the part to be photographed is focused with the micrometer. An exposure of 0.5 to 1 second is given with Plus-X films. The authors have not yet been able to obtain color films, but the use of such films would be of definite advantage. Either wide or narrow slits are used; with the wide slit excellent photographs of the iris are obtained; with the narrow slit it is possible to follow the faces of the angles and get a good impression of depth.

COMMENT

Gonioscopy has not reached the point of practical usefulness which it will surely attain. Before any procedure can be generally applied, it must be made simple and practical. This requires the interest of many observers over a considerable period.
R.I.L.

Effect of Oily Drops On Eyes Exposed to Mustard Vapor

G. I. UHDE and E. R. DUNPHY *(American Journal of Ophthalmology,* 29:1562, Dec. 1946) report experiments to determine the effect of oily drops on eyes exposed to mustard vapor, because it was frequently stated during the war that oily drops should never be used in eyes that might be exposed to this vapor. The theory was that since mustard is soluble in fat it might be concentrated in the oily drops and thus produce a serious eye burn. In experiments on rabbits, one eye was treated with various oily drops prior to and during exposure to mustard vapor, while the opposite eye was untreated. It was found that the lesion caused by the mustard vapor was less severe in the treated eye in 65 per cent of the animals, of the same degree in 36 per cent, and more severe in only 1.5 per cent. In some instances complete protection of the treated eye was obtained with Radiostol (irradiated ergosterol) in peanut-oil base. Twelve human volunteers were exposed to mustard vapor in relatively low concentration; one eye of each volunteer was treated with oily drops before or immediately after the exposure, while the opposite eye was untreated. There was no significant difference in the severity of the lesions in the two eyes. Instillation of oily drops (vitamin A or Radiostol in peanut oil) into the eyes three times daily for four days after exposure to mustard vapor did not delay normal healing. These results show that the belief that there is danger in using oil drops in the treatment of eyes exposed to mustard gas is "unfounded."

COMMENT

"The bearins of the observation lies in the application on it" says Sam Weller in Pickwick Papers. Practical demonstration often destroys the finest theories.
R.I.L.

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MAURICE RAYNAUD
1834–1881

Classical Quotations

● **Without appreciable cause, one or many fingers become pale and cold all at once; in many cases it is the same finger which is first attacked; the others become dead successively and in the same order . . . The determining cause is often the impression of cold . . . sometimes even a simple mental emotion is enough to bring on these changes . . . In the more pronounced cases, the pallor of the extremities is replaced by a cyanotic color . . . Finally a vermilion color shows itself at the margin and little by little gains ground . . . This patch gives place to the normal pink color and then the skin is found to have entirely returned to the primitive condition.**

MAURICE RAYNAUD
Paris Thesis, 1862.

Psychoses in the Aged

Mental Disorders in Later Life. Edited by Oscar J. Kaplan. Stanford University, Calif., Stanford University Press, [c. 1945]. 8vo. 436 pages, illustrated. Cloth, $5.00.

THE editor has arranged in logical sequence a group of articles by various authorities on the problem of mental disorders in older people. His original contributions on the aged subnormal as well as Eugenia Hanfmann's discussion of "Older Mental Patients after Long Hospitalization" are of considerable interest to psychiatrists and others dealing with those institutionalized mental defectives whose latter years may be spent in chronic wards in state hospitals and whose emotional needs often go unrecognized.

This book is of outstanding importance in the rapidly developing field of geriatrics.

EDWARD F. FALSEY

Obstetrics for the Nurse

Obstetric Management and Nursing. By Henry L. Woodward, M.D., and Bernice Gardner, R.N. with Sections on Home Deliveries, by William P. Gillespie, M.D., Diseases of the Newborn, by Harold F. Downing, M. D., and The Public Health Nurse in Obstetrics, by F. Kirby Harder, M.D. 3rd Edition. Philadelphia, F. A. Davis Co., [c. 1946]. 8vo. 828 pages, illustrated. Cloth, $3.50.

THE third edition of this standard text has been brought up to date by the inclusion of recent advances in obstetrics. Sections on prenatal care, anesthesia, and infant care have been rewritten. The sections on toxemia, erythroblastosis, adherent placenta, abortions, Caesarean section, and sepsis have been supplemented to a considerable extent.

The reviewer has for several years selected this text for use in teaching obstetric nursing and has found it admirably suited for home study and classroom use. This edition has notably improved the book and it is highly recommended to those who teach obstetric nursing.

ALEXANDER H. ROSENTHAL

Quackery Unmasked

Where Do People Take Their Troubles? By Lee R. Steiner. Boston, Hopghton Mifflin Co., [c. 1945]. 12mo. 265 pages. Cloth, $3.00.

THE author shows from personal investigations where people go for the solution of personal and domestic problems. There has grown up a great body of self-appointed advisers, without adequate preparation, at times reaching the low of the quack or charlatan. The author seeks proper training for such work, as in psychology and psychiatry, and a sympathetic and non-commercial attitude. What interests the writer is the extent to which these consultations are being sought and the inadequacy of professional and legal supervision of those claiming some extraordinary ability to guide and advise their fellow men.

JOSEPH RAPHAEL

Industrial Medicine

Medicine in Industry. By Bernhard J. Stern, Ph.D. New York, Commonwealth Fund, [c. 1946]. 8vo. 209 pages. Cloth, $1.50.

IN this monograph, past accomplishments and recent advances in industrial medicine are reviewed with suggestions for future advances. The author discusses recent developments in health and insurance programs, the problems of the handicapped in industry and the relationships between the industrial physician and the general practitioner. Although great advances have been made in recent years in the field of industrial medicine, there still remains a fruitful approach to preventive medicine and public health in this field of endeavor. The physician in Industrial Medicine and in fact all physicians will find this monograph of much interest.

IRVING GRAY

New Edition of Howell's Physiology

Howell's Textbook of Physiology. Edited by John F. Fulton, M.D., with the collaboration of Donald H. Barron, Ph.D., John R. Brobeck, M.D., Robert W. Clarke, Ph.D., et al. 15th Edition. Philadelphia, W. B. Saunders Co., [c. 1946]. 8vo. 1304 pages, illustrated. Cloth, $8.00

THIS is an extensive expansion and revision of Howell's classic textbook of physiology. As might be expected in a textbook in which separate sections are written by different authors, there is considerable variability in the quality and extensiveness of treatment.

In spite of the rather abbreviated treatment given to the physiology of metabolism and the endocrine glands, the book is on the whole an extremely valuable contribution to the literature of physiology, and will be found indispensable for many special purposes. ARTHUR SHAPIRO

History of Epilepsy

The Falling Sickness. A History of Epilepsy from the Greeks to the Beginnings of Modern Neurology. By Owsei Temkin, M.D. Baltimore, Johns Hopkins Press, [c. 1945]. 4to. 380 pages, illustrated. Cloth, $4.00.

THIS monumental work of Dr. Temkin, associate professor of the history of medicine at Johns Hopkins University, should be read and reread by all those sincerely interested, not only in the epilepsies in particular, but also in neurology and psychiatry in general.

The book is meticulously documented with numerous references which not only add great value from the medical historian's standpoint, but also to the student of neurology and psychiatry, who is bent upon gaining a genetic-dynamic picture of his subject's developmental stages, in part at least, to the present time.

FREDERICK L. PATRY

BOOKS RECEIVED

for review are promptly acknowledged in this column: we assume no other obligation in return for the courtesy of those sending us the same. In most cases, review notices will be promptly published shortly after acknowledgment of receipt has been made in this column.

Quantitative Clinical Chemistry. By John P. Peters, M.D. & Donald D. Van Slyke, Ph.D. 2nd Edition. Vol. I. "Interpretations." Baltimore, Williams & Wilkins, [c. 1946]. 8vo. 1,041 pages, illustrated. Cloth, $7.00.

The Diagnosis and Treatment of Bronchial Asthma. By Leslie N. Gay, M.D. Baltimore, Williams & Wilkins, [c. 1946]. 8vo. 334 pages, illustrated. Cloth, $5.00.

Hygiene. A Textbook for College Students on Physical and Mental Health from Personal and Public Aspects. By Florence L. Meredith, M. D. 4th Edition. Philadelphia, Blakiston Co., [c. 1946]. 8vo. 838 pages, illustrated. Cloth, $4.00.

Principles in Roentgen Study of the Chest. By William Snow, M.D. Springfield, Ill., Charles C. Thomas, [c. 1946]. 4to. 414 pages, illustrated. Cloth, $10.00.

Lessons in Pharmaceutical Latin and Prescription Writing and Interpretation. By Hugh C. Muldoon, D.Sc. 4th Edition. New York, John Wiley & Sons, [c. 1946]. 12mo. 256 pages. Cloth, $2.50.

Les Stomatites. By MM. Lebourg, Hénault, Lambert, et al. Paris, Masson et Cie, [c. 1946]. 8vo. 212 pages.

Syndrome Cortico-Pleural. Son Etude Clinique et Experimentale. By Professor J. Skladal. Paris, Masson et Cie, [c. 1946]. 8vo. 144 pages, illustrated.

Der Rhesusfaktor. Seine Theoretische und Praktische Bedeutung. By Professor Dr. G. Fanconi, Professor Dr. A. Grumbach, Professor Dr. H. Willi, et al. Basel, Benno Schwabe & Co., [c. 1946]. 8vo. 160 pages, illustrated. Paper, Sw. fr. 10.